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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/713,775	11/15/2000	Jae-Young Jung	12568-002001 / OPP 000771	3088 ✓

7590

08/15/2002

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EXAMINER

YEE, DEBORAH

ART UNIT

PAPER NUMBER

1742

DATE MAILED: 08/15/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

mk-11

**Office Action Summary**

Application N .

09/713,775

Applicant(s)

JUNG, JAE-YOUNG

Examiner

Deborah Yee

Art Unit

1742

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 July 2002 and 22 April 2002.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 9.                      6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Arguments***

Applicant's arguments with respect to claims 1 to 8 are have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1,3,5 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scarlin et al (US Patent No. 5,415,706).

In claim 1 of columns 5 and 6, Scarlin discloses a martensitic steel alloy with constituents whose wt% ranges overlap those recited by the claims; such overlap renders applicant's composition prima facie obvious despite differences in non-overlapping areas, see *In re Malagari*, 148 USPQ549.

More specifically, note example A, lines 20 to 32, column 4 which meets the claimed composition but contains slightly lower amounts of Ni and Cr. It would, however, be obvious for one skilled in the art and matter of routine optimizing to increase Cr and Ni, since broad ranges of 8 to 13%Cr and 0.05 to 2.0% Ni are taught.

Although prior art alloy contains the additional element, Co, not recited by the claims, such would not be a patentable difference. Note that claims recite "comprising" which is inclusive all unrecited elements, even in major amounts. Moreover, even if Co

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was excluded from the recited claims, the present invention would not patentably distinguish over the prior art. Note that the omission of an element (Co) with the consequent loss of its function would not be a patentable distinction, see *In re Wilson et al*, 153 USPQ740.

In regard to the method claims, note that Scarlin et al. on lines 1 to 11 of column 4 subjects steel to casting, austenitize annealing at 1150C (within applicant's annealing temperature range of 800 to 1150C) followed by tempering at 780C (slightly higher than applicant's claimed tempering temperature of 350 to 575C). It is the examiner's position that tempering is a well known conventional practice to soften and relieve stress for steel. The degree to which this is achieved can be determined by temperature and time, and would be a matter of choice well within the skill of the artisan and productive of no new and unexpected results.

Claims 2, 4, 6 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scarlin et al (US Patent 5,415,706) as applied to claims 1,3,5, and 7 above, and further in view of the English abstract of Japanese patent 402217444A.

Scarlin et al discloses a martensitic steel alloy which closely meets the recited claims but fails to include Ti and/or Ta. It would, however, be obvious to incorporate these elements because they are chemically equivalent to V and Nb which are already taught by the prior art, and therefore could be used interchangeably. Note that Ti, Ta, V, and Nb belong in the same family of the periodic table. Moreover, it is a common practice in the art to incorporate V, Nb, Ti and Ta to form carbides and nitrides in a martensitic stainless steel, as evident by the English abstract of JP'444A.

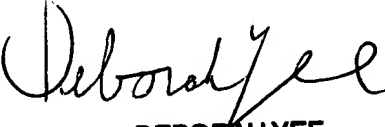
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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Deborah Yee whose telephone number is 703-308-1102. The examiner can normally be reached on Monday-Friday from 6:30 to 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 703-308-1146. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-873-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

dy  
August 13, 2002

  
DEBORAH YEE  
PRIMARY EXAMINER